

REMARKS

In response to the Notice of Non-Compliant Amendment, Applicants have renumbered the new claims as Claims 52-57 to avoid two claims numbered as 51. Applicants have made corresponding changes to the remarks below to reflect the renumbering of the new claims. The remarks below are otherwise the same as those filed on December 15, 2004 in response to the Official Action of September 20, 2004 (hereinafter "Office Action"). In response to the Office Action, the Related Application section on Page 1, lines 5-9 of the Specification has been amended to provide the missing U.S. patent application serial numbers. Claim 16 has been amended to remove its multi-dependency from other claims. Moreover, the independent claims 1, 19, 35, and 37, and dependent claims 4-6, 12-15, 18, 22-23, 40-41, and 45-49, have been amended, and Claims 52-57 have been added to emphasize various aspects of how quality of service is provided for a series of related messages exchanged between computers. Applicants respectfully submit that all of the pending claims are patentable for at least the reasons that will now be explained.

Amended Independent Claims 1, 19, 35, and 37 Are Patentable Over Yazaki

Claims 1-4, 12-21, 27-33, 34, 35, 37-39, and 45-51 stand rejected under 35 U.S.C. Sec. 102(e) as anticipated by U.S. Patent No. 6,768,738 to Yazaki et al. ("Yazaki").

Amended independent Claim 1 recites (underlining added):

1. A method of providing improved quality of service over a series of related messages exchanged between computers in a networking environment, comprising steps of:

determining one or more transactional quality of service ("TQoS") values to be applied to the related messages;

using the determined TQoS values when transmitting at least one of the related messages for delivery to a particular one of the computers;

annotating selected ones of the related messages with information reflecting the determined TQoS values; and

transmitting the annotated ones of the related messages with the information reflecting the determined TQoS values to the particular computer.

Accordingly, transaction quality of service ("TQoS") is determined for related messages, the related messages are annotated with information that reflects the determined TQoS values, and the annotated messages with the information that reflects the determined TQoS values is transmitted to a computer.

Yazaki is directed to controlling QoS in message packets that are communicated through a router. Yazaki describes that "when a packet is inputted from an ith line 123-i to a line interface unit ... a receiver circuit 124-i adds an internal header to the packet to thereby convert the received packet to an internal packet format useful inside the router". (Yazaki, Col. 13, lines 11-16, emphasis added). An "output FIFO allocation circuit 121 receives ... packet priority information 13, it writes it into the header of the corresponding packet ... as QoS control information". (Yazaki, Col. 13, lines 62-65). However, before transmission, "[e]ach transmission circuit 125-i deletes the internal header field 430 from a packet read out from the corresponding FIFO buffer 127 ... followed by delivery to its corresponding output lines 123-i." (Yazaki, Col. 14, lines 22-26).

Accordingly, an internal header is added to a packet, QoS control information is added to the internal header for use inside the router, and the internal header is deleted from the packet before the packet is transmitted from the router. Consequently, the QoS control information is used only inside the router and is not transmitted from the router.

Accordingly, Yazaki does not disclose annotating related messages with information that reflects determined TQoS values, and transmitting the annotated messages with the information that reflects the determined TQoS values to a computer, as recited in Claim 1. For at least these reasons, Applicants respectfully submit that Claim 1 is not anticipated by Yazaki.

Independent Claims 19, 35, and 37 have been amended to include analogous recitations to Claim 1, and are submitted to be patentable over Yazaki for the reasons provided above.

Dependent Claims 2-18, 20-34, 36, and 38-51 are patentable at least per the patentability of the independent claims from which they depend. Moreover, Applicants submit that these claims provide further bases for patentability, as will now be explained below.

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Amended Dependent Claims 5, 6, 22, 23, 40, and 41 Are Patentable Over Yazaki in View of Ben-Shaul

Claims 2-18, 20-34, and 38-51 stand rejected under 35 U.S.C. Sec. 103(a) as unpatentable over Yazaki in view of U.S. Publication No. 2002/0010798 by Ben-Shaul et al. ("Ben-Shaul").

Claim 5 has been amended to recite:

5. The method according to claim 1, wherein the particular computer is a client computer, and transmitting the annotated ones of the related messages with the information reflecting the determined TQoS values to the particular computer comprises transmitting the related messages from a server computer to the client computer, and further comprising:

receiving the transmitted annotated messages at the client computer; and
transmitting the TQoS values from the client computer to the server computer
with subsequent ones of the related messages.

Accordingly, Claim 5 further defines that the annotated messages with the TQoS values are transmitted from a server computer to a client computer, and that the client computer subsequently returns the TQoS values with related messages to the server computer. Consequently, the server computer can provide quality of service over a series of related messages to the client computer based on the TQoS values that the client computer sends thereto with related messages (e.g., webpage requests).

As explained above, Yazaki does not disclose transmitting from the disclosed router messages that have been annotated with information that reflects determined TQoS values. Moreover, for this reason, Yazaki does not disclose that a client computer would receive TQoS values from a server computer, or that it would return such received TQoS values back to the server computer with subsequent related messages.

The Office Action also cites to page 1, paragraph 8 of Ben-Shaul as teaching "automatically returning the TQoS values to a server computer in each subsequent one of the related messages". (Office Action, Page 6). The cited portion of Ben-Shaul is repeated before:

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Not all requests for HTTP resources from a given site need to be redirected to the CDD, however. A common model, employed by Akamai Technologies, is depicted in FIG. 1 and FIG. 2. At the origin server 10, hypertext markup language (HTML) pages are modified by assigning the uniform resource locators (URLs) of selected resources. These are typically images with domain name system names of the server of the content delivery and distribution provider 12, instead of the origin server 10. The server of the CDD provider 12 in this example carries the domain name www.cdd.com. As shown in FIG. 1, when a client 14 requests a page that includes such "exported" objects, the request, indicated by line 16, arrives at the origin server 10 as a usual request (following the DNS name resolution at domain znn.com). The origin server 10 replies with the desired page to the client 14, indicated by line 18. Subsequent requests from the client 14 for the embedded objects within that page are served from the servers of the content delivery and distribution provider 12, however, as indicated by line 20 in FIG. 2. (Ben-Shaul, Page 1, Paragraph 8).

The cited portion of Ben-Shaul appears to be directed to redirecting client requests based on which server contains pages that have embedded objects that are requested by the client. The "embedded objects" that are referred to in Ben-Shaul are within pages on a server. Applicants submit that Ben-Shaul contains no description whatsoever that the server annotates messages with TQoS values that are sent to a client, or that a client computer returns such received TQoS values back to the server computer with subsequent related messages. Accordingly, Applicants submit that Claim 5 is patentable over Yazaki in view of Ben-Shaul.

Claims 22 and 40 have been amended to include analogous recitations to Claim 5, and are therefore submitted to be patentable over Yazaki in view of Ben-Shaul for the reasons explained above.

Claim 6 has been amended to recite:

6. The method according to claim 5, wherein:
the annotated message transmitted from the server computer to the client computer includes an object reference that is annotated to carry the TQoS values; and transmitting the TQoS values from the client computer to the server computer with subsequent ones of the related messages comprises automatically returning the TQoS values to the server computer with subsequent ones of the related messages based on the annotation of the object reference in a related message that is received from the server computer.

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Accordingly, Claim 6 further defines that the annotated messages with the TQoS values are automatically return to a server computer with subsequent related messages from a client computer based on an object reference that is received in a related message from the server computer. As explained above, neither Yazaki nor Ben-Shaul, nor the combination thereof, teach or suggest a server that annotates messages with TQoS values which are sent to a client, or that a client computer returns such received TQoS values back to the server computer with subsequent related messages. Moreover, Applicants submit that these references also fail to teach or suggest automatically returning TQoS values to a server computer with subsequent related messages from the client computer based on an object reference that is received in a related message from the server computer. Accordingly, Applicants submit that Claim 6 is patentable over Yazaki in view of Ben-Shaul.

Claims 23 and 41 have been amended to include analogous recitations to Claim 6, and are therefore submitted to be patentable over Yazaki in view of Ben-Shaul for the reasons explained above.

New Claims 52-57 Are Patentable Over The Cited References

New dependent Claim 52 recites:

52. The method according to claim 5, further comprising storing the TQoS values as one or more cookies on the client computer.

Accordingly, Claim 52 further defines that TQoS values, which are received within annotated messages from a server computer, are stored as one or more cookies on the client computer. Applicants submit that this recitation is not taught or suggested by any of the cited references.

New Claims 54 and 56 contain analogous recitations to Claim 52, and are therefore submitted to be patentable over Yazaki in view of Ben-Shaul for the reasons explained above.

New dependent Claim 53 recites:

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53. The method according to claim 52, wherein transmitting the TQoS values from the client computer to the server computer with subsequent ones of the related messages comprises determining the TQoS values to be transmitted from the client computer based on the stored one or more cookies on the client computer.

Accordingly, Claim 53 further defines that TQoS values are determined based on the stored cookies on the client computer, and that the determined TQoS values are then transmitted with subsequent related messages to the server computer. Applicants submit that this recitation is not taught or suggested by any of the cited references.

New Claims 55 and 57 contain analogous recitations to Claim 53, and are therefore submitted to be patentable over Yazaki in view of Ben-Shaul for the reasons explained above.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested.

Respectfully submitted,



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